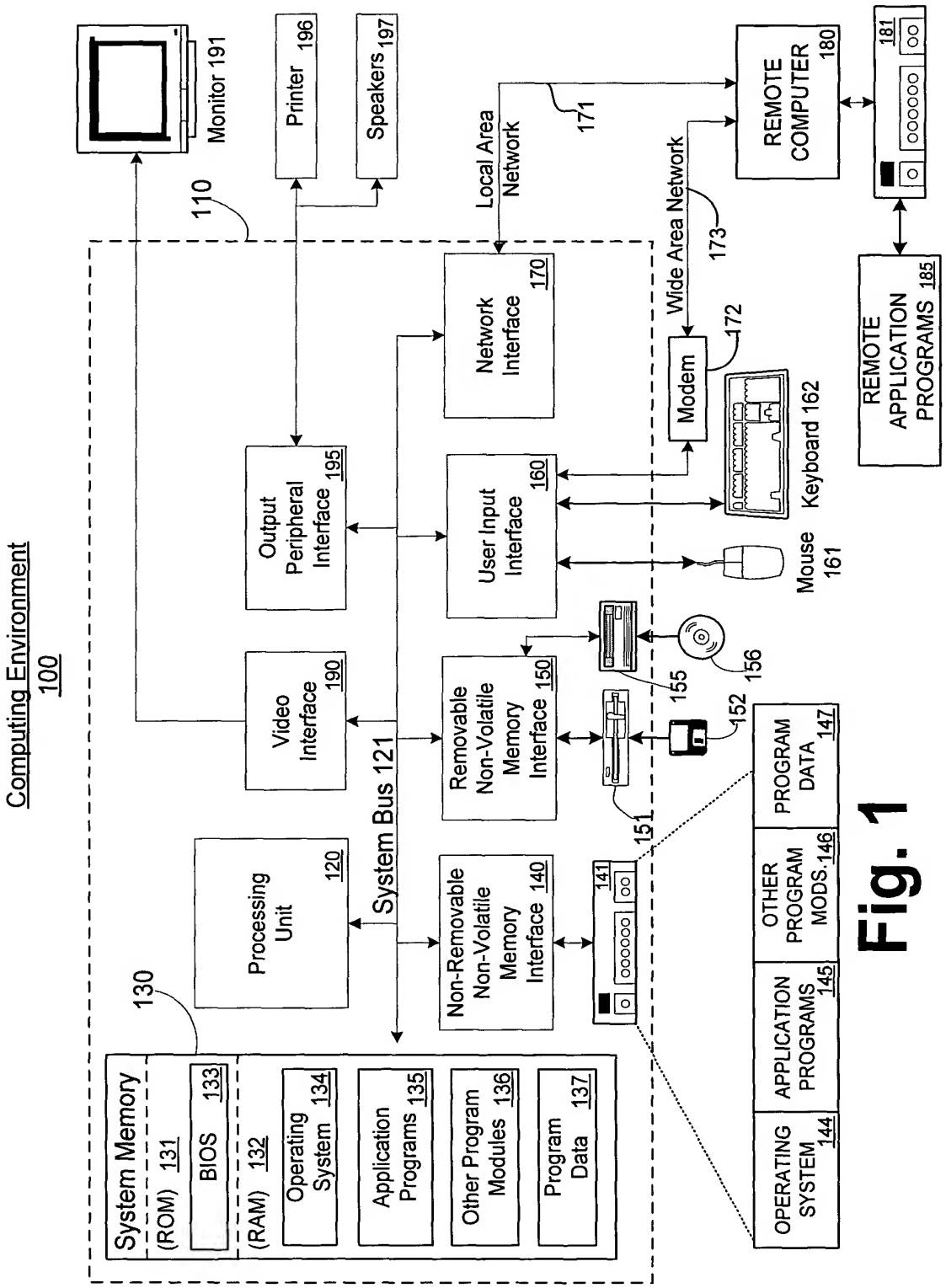

Computing Environment
100
110
Monitor 191
Printer 196
Speakers 197
Local Area Network
171
Wide Area Network
173
REMOTE COMPUTER
180
181
REMOTE APPLICATION PROGRAMS 185
Network Interface 170
Modem 172
Output Peripheral Interface 195
User Input Interface 160
Keyboard 162
Mouse 161
Video Interface 190
Removable Non-Volatile Memory Interface 150
155
156
152
151
System Bus 121
Processing Unit 120
Non-Removable Non-Volatile Memory Interface 140
141
130
System Memory
(ROM) 131
BIOS 133
(RAM) 132
Operating System 134
Application Programs 135
Other Program Modules 136
Program Data 137
OPERATING SYSTEM 144
APPLICATION PROGRAMS 145
OTHER PROGRAM MODS. 146
PROGRAM DATA 147

Fig. 1

Fig. 2

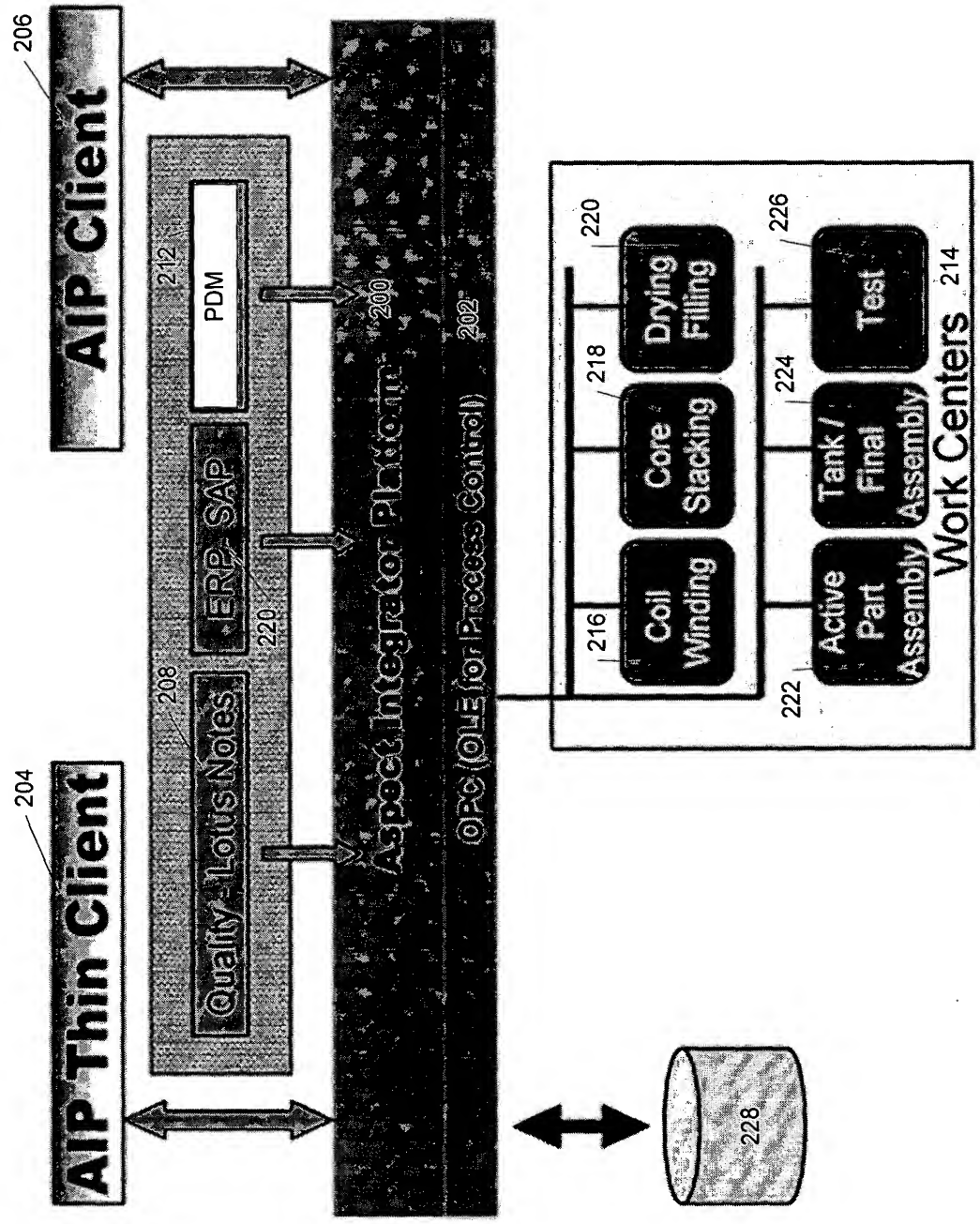
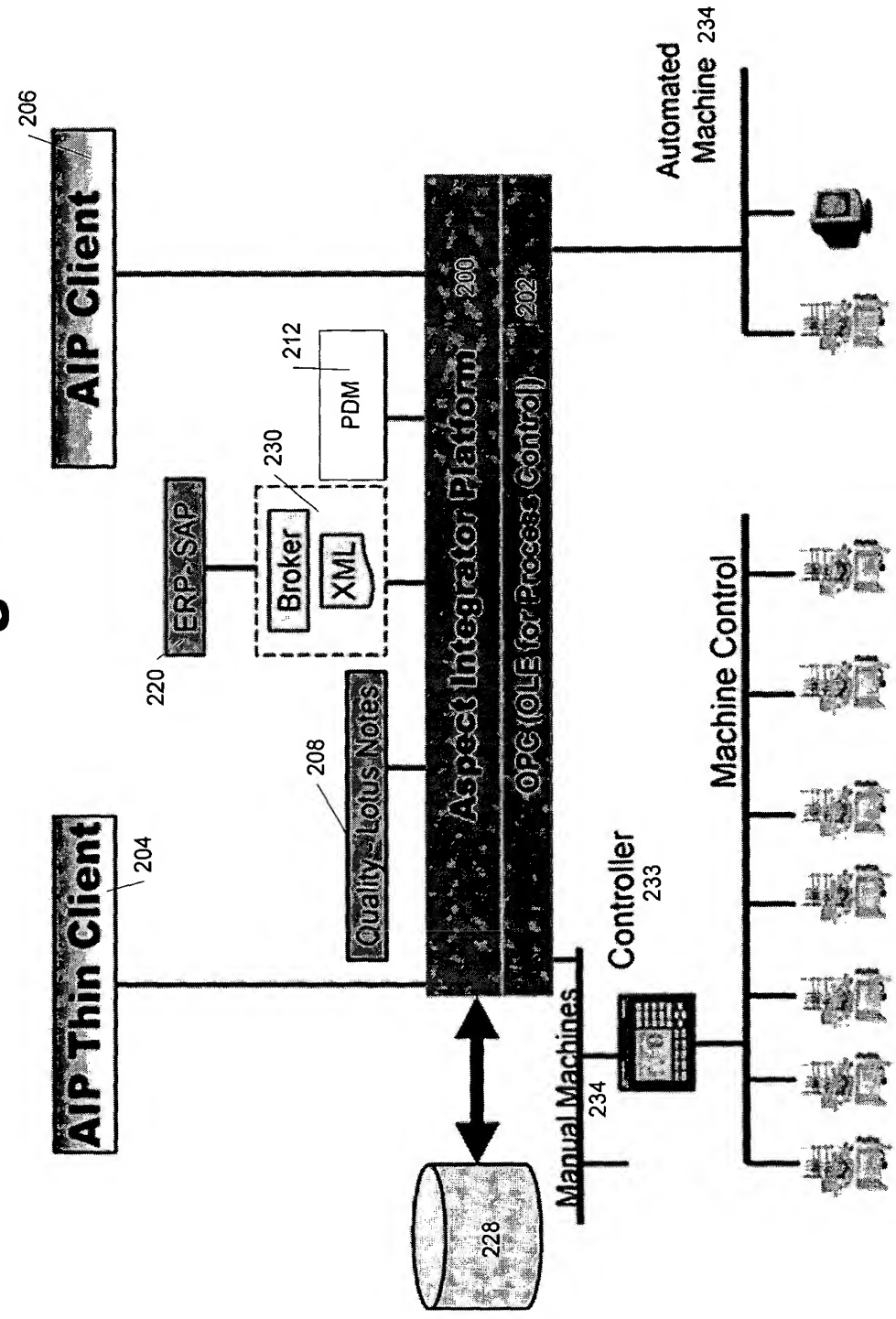

206
AIP Client
204
AIP Thin Client
212
PDM
ERP, SAP
208
Quality - Lotus Notes
220
Aspect Integrator Platform
200
OPC (OLE for Process Control)
202
220
Drying Filling
218
Core Stacking
216
Coil Winding
226
Test
224
Tank / Final Assembly
222
Active Part Assembly
Work Centers
214
228

Fig. 3


206
AIP Client
Automated Machine 234
212
PDM
230
ERP-SAP
Broker
XML
220
Aspect Integrator Platform 200
OPC (OLE for Process Control) 202
208
Quality - Lotus Notes
AIP Thin Client
204
Controller
233
Machine Control
Manual Machines
234
228

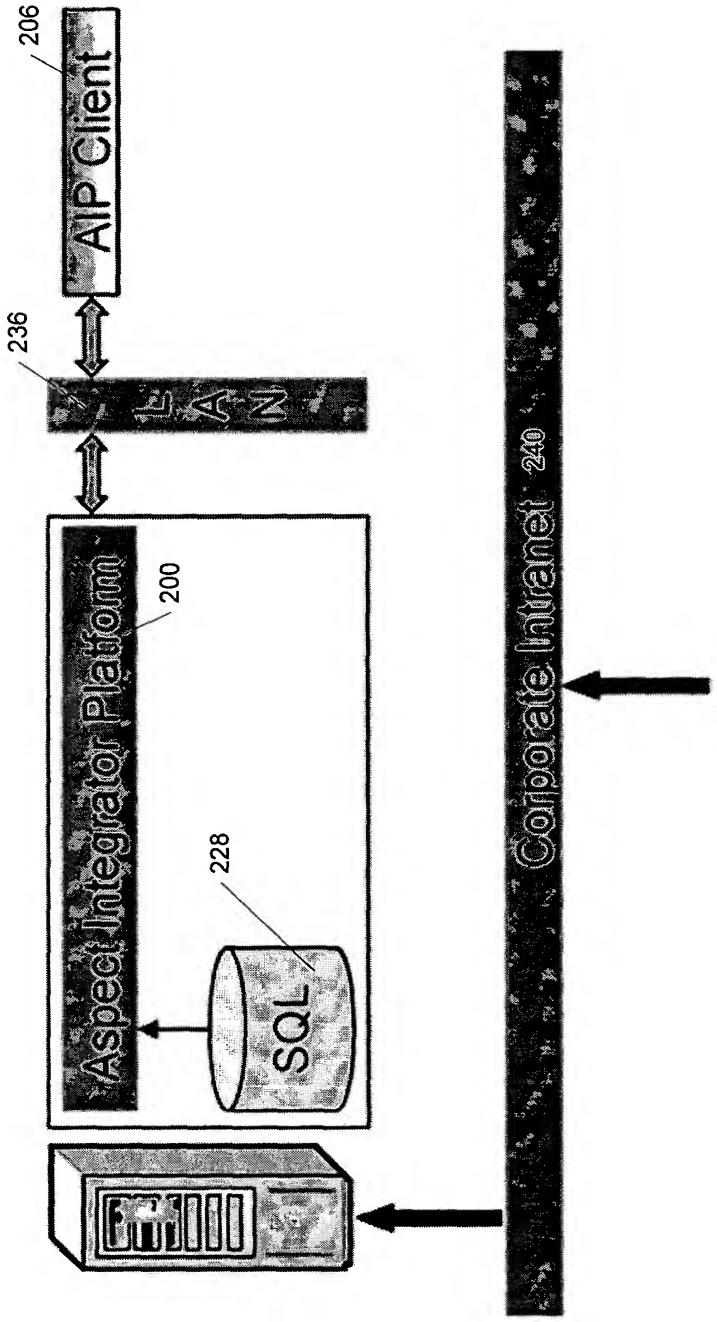

206
AIP Client
236
LAN
Aspect Integrator Platform
200
228
SQL
Corporate Intranet
240
Directory Replication & Database Replication

Fig. 4

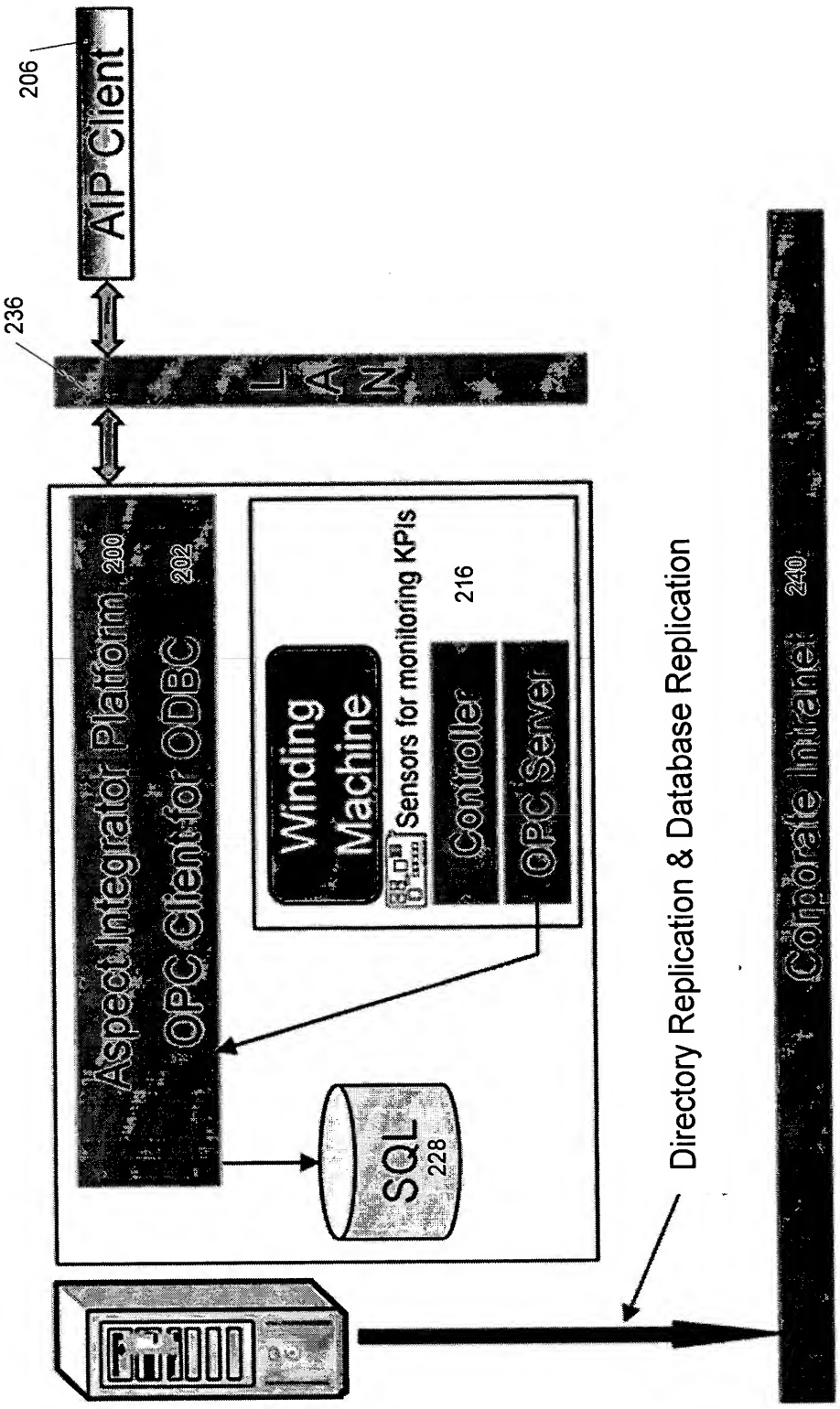

206
AIP Client
236
LAN
Aspect Integrator Platform 200
OPC Client for ODBC 202
Winding Machine
Sensors for monitoring KPIs
Controller
OPC Server
216
SQL
228
Directory Replication & Database Replication
Corporate Intranet 240

Fig. 5

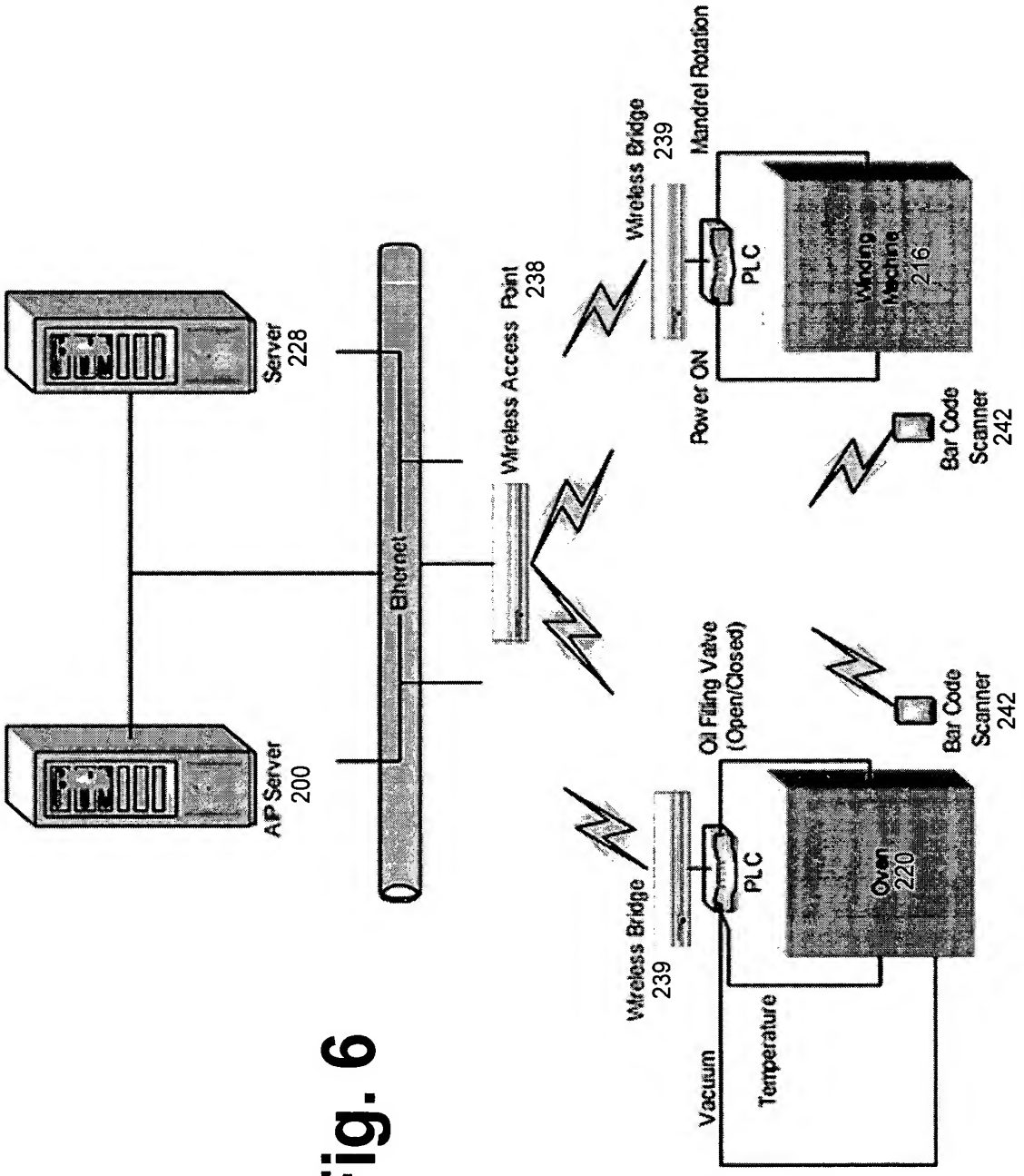
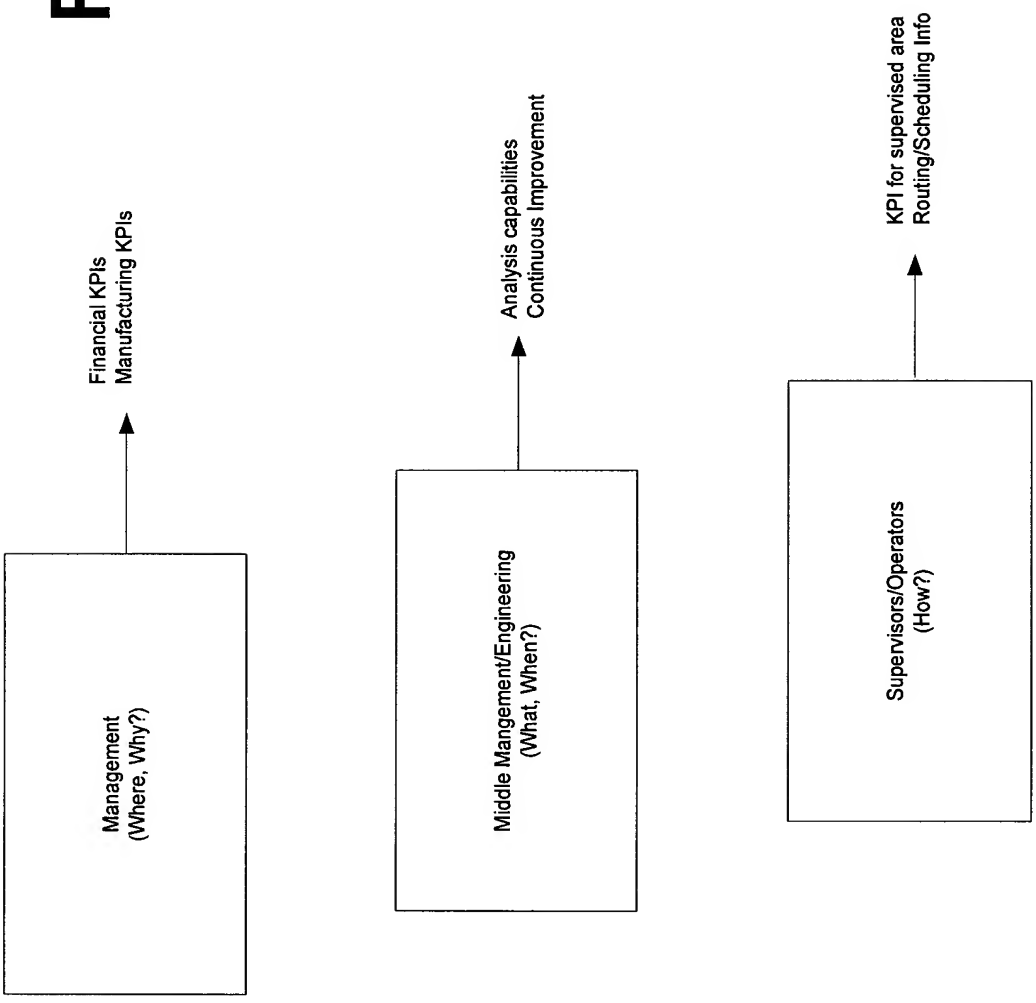

Server
228
AP Server
200
Ethernet
Wireless Access Point
238
Wireless Bridge
239
Mandrel Rotation
PLC
Winding Machine
216
Power ON
Bar Code Scanner
242
Oil Filling Valve (Open/Closed)
Bar Code Scanner
242
Wireless Bridge
239
PLC
Oven
220
Vacuum
Temperature

Fig. 6

Fig. 7


Financial KPIs
Manufacturing KPIs
Management
(Where, Why?)
Analysis capabilities
Continuous Improvement
Middle Mangement/Engineering
(What, When?)
KPI for supervised area
Routing/Scheduling Info
Supervisors/Operators
(How?)

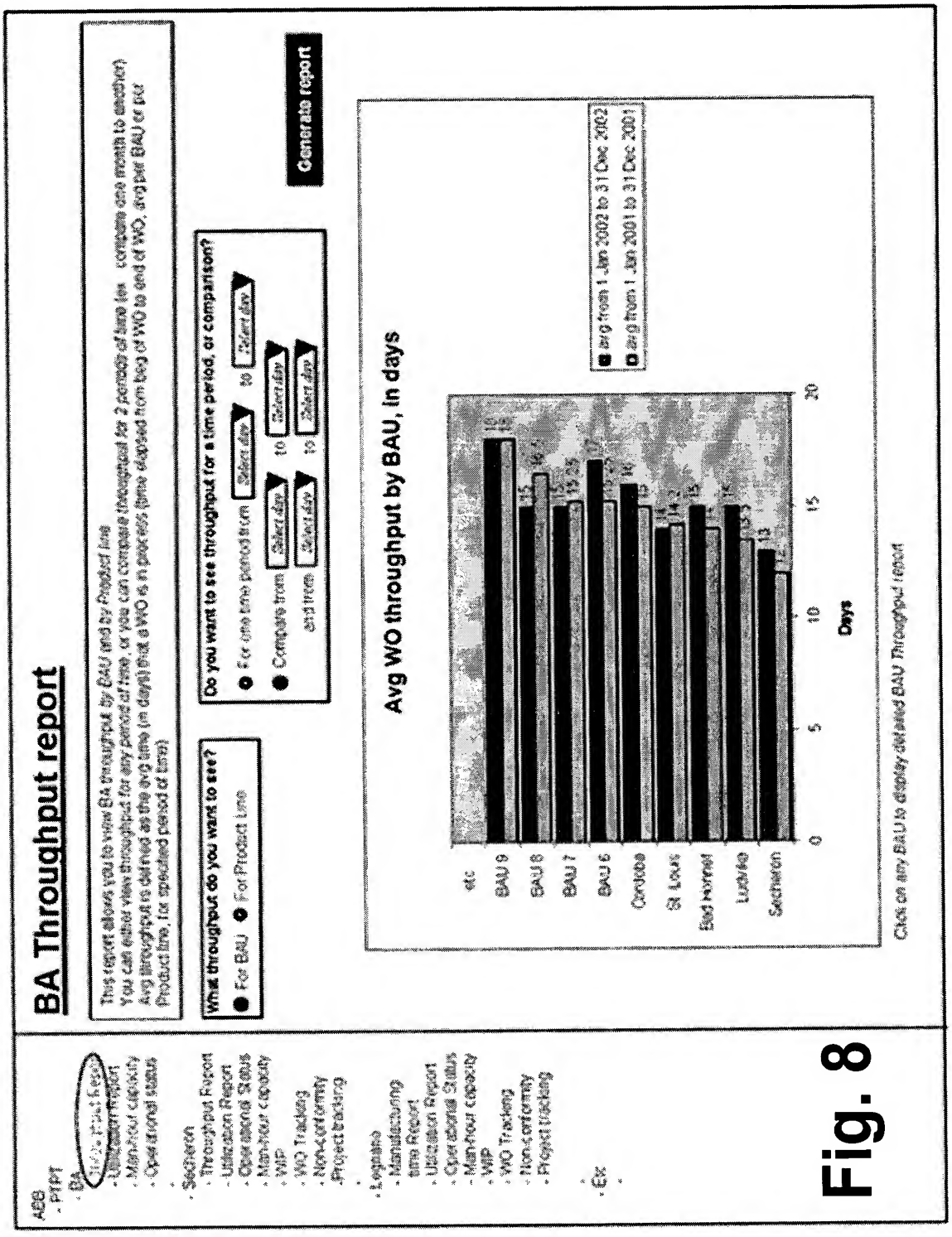

BA Throughput report
This report allows you to view BA throughput, by BAU and by Product line
You can either view throughput for any period of time, or you can compare throughput for 2 periods of time (ex: compare one month to another)
Avg throughput is defined as the avg time (in days) that a WO is in process (time elapsed from beg of WO to end of WO, avg per BAU or per Product line, for specified period of time)
What throughput do you want to see?
For BAU
For Product Line
Do you want to see throughput for a time period, or comparison?
For one time period from Select day to Select day
Compare from Select day to Select day
and from Select day to Select day
Generate report
Avg WO throughput by BAU, in days
avg from 1 Jan 2002 to 31 Dec 2002
avg from 1 Jan 2001 to 31 Dec 2001
etc
BAU 9
BAU 8
BAU 7
BAU 6
Cordoba
St Louis
Bad Hombrel
Ludvika
Sacramon
0
5
10
15
20
Days
Click on any BAU to display detailed BAU throughput report

Fig. 8

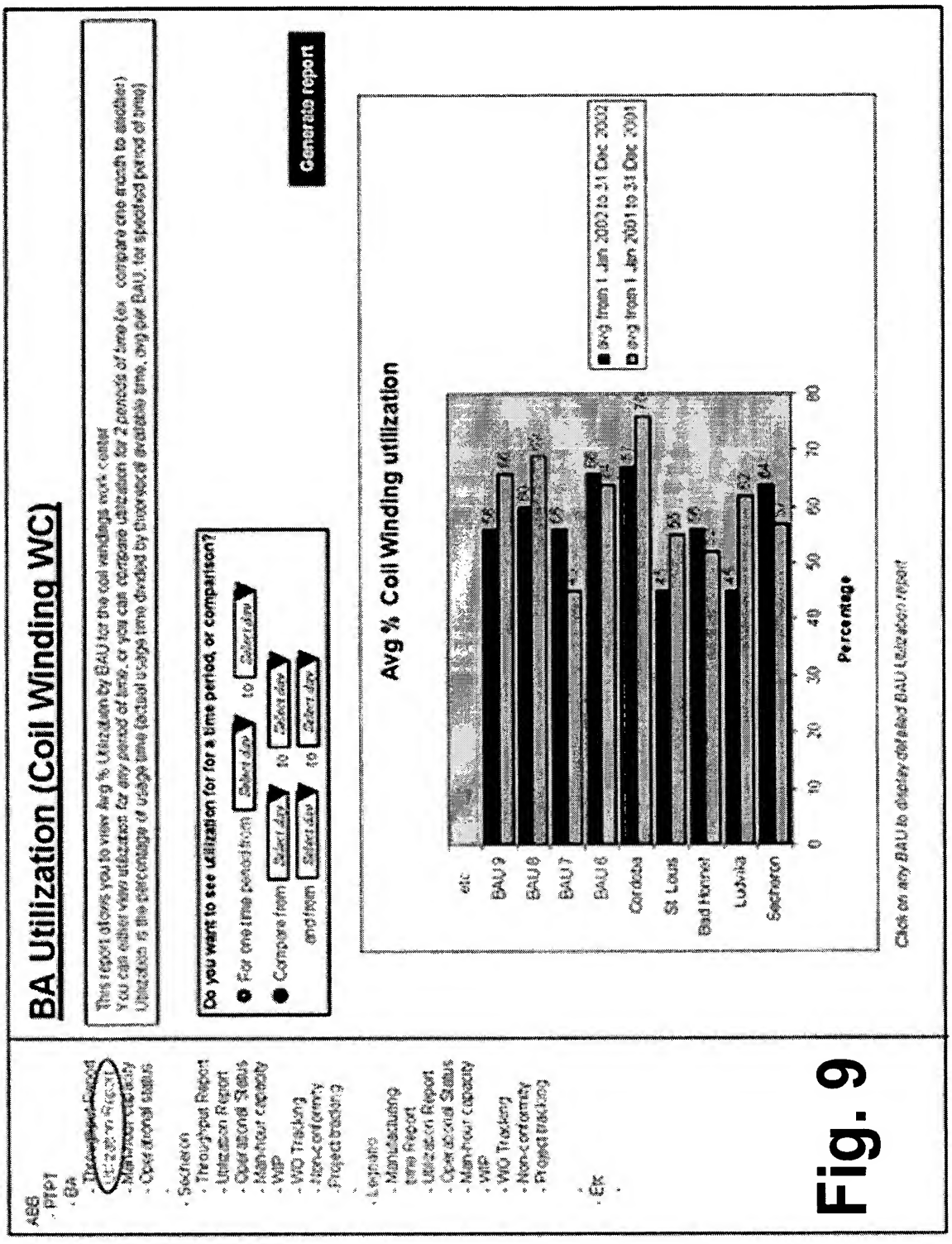


ABB
PTPT
BA
Throughput Report
Utilization Report
Operational Status
Man-hour capacity
WIP
WO Tracking
Non-conformity
Project tracking
Sochaux
Throughput Report
Utilization Report
Operational Status
Man-hour capacity
WIP
WO Tracking
Non-conformity
Project tracking
Leyland
Manufacturing time Report
Utilization Report
Operational Status
Man-hour capacity
WIP
WO Tracking
Non-conformity
Project tracking
Etc
BA Utilization (Coil Winding WC)
This report allows you to view Avg % Utilization by BAU for the coil winding work center
You can either view utilization for any period of time, or you can compare utilization for 2 periods of time (ex: compare one month to another)
Utilization is the percentage of usage time (actual usage time divided by theoretical available time, avg per BAU, for specified period of time)
Do you want to see utilization for for a time period, or comparison?
For one time period from Select day to Select day
Compare from Select day to Select day
and from Select day to Select day
Generate report
Avg % Coil Winding utilization
avg from 1 Jan 2002 to 31 Dec 2002
avg from 1 Jan 2001 to 31 Dec 2001
etc
BAU 9
BAU 8
BAU 7
BAU 6
Cordoba
St Louis
Bad Homnef
Ludvika
Sochaux
0
10
20
30
40
50
60
70
80
Percentage
Click on any BAU to display detailed BAU Utilization report

Fig. 9

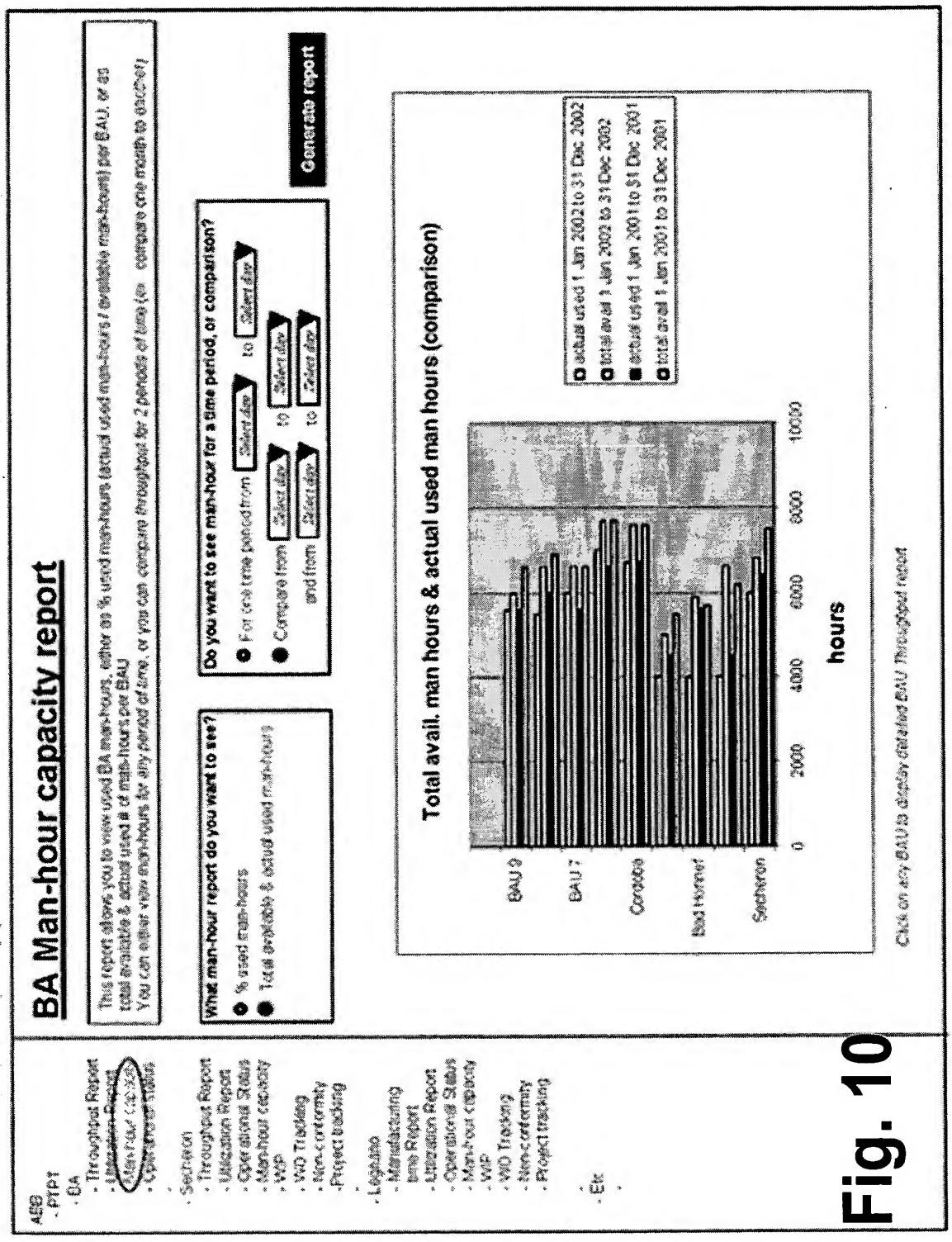

ASB
PTPT
BA
Throughput Report
Utilization Report
Man-hour capacity
Operational Status
Section
Throughput Report
Utilization Report
Operational Status
Man-hour capacity
WIP
WO Tracking
Non-conformity
Project tracking
Logistic
Manufacturing time Report
Utilization Report
Operational Status
Man-hour capacity
WIP
WO Tracking
Non-conformity
Project tracking
Etc
BA Man-hour capacity report
This report allows you to view used BA man-hours, either as % used man-hours (actual used man-hours / available man-hours) per BAU, or as total available & actual used # of man-hours per BAU
You can either view man-hours for any period of time, or you can compare throughput for 2 periods of time (ex: compare one month to another)
What man-hour report do you want to see?
% used man-hours
Total available & actual used man-hours
Do you want to see man-hour for a time period, or comparison?
For one time period from Select day to Select day
Compare from Select day to Select day
and from Select day to Select day
Generate report
Total avail. man hours & actual used man hours (comparison)
actual used 1 Jan 2002 to 31 Dec 2002
total avail 1 Jan 2002 to 31 Dec 2002
actual used 1 Jan 2001 to 31 Dec 2001
total avail 1 Jan 2001 to 31 Dec 2001
BAU 9
BAU 7
Conduite
Bad Honnef
Sechseck
0
2000
4000
6000
8000
10000
hours
Click on any BAU to display detailed BAU Throughput report

Fig. 10

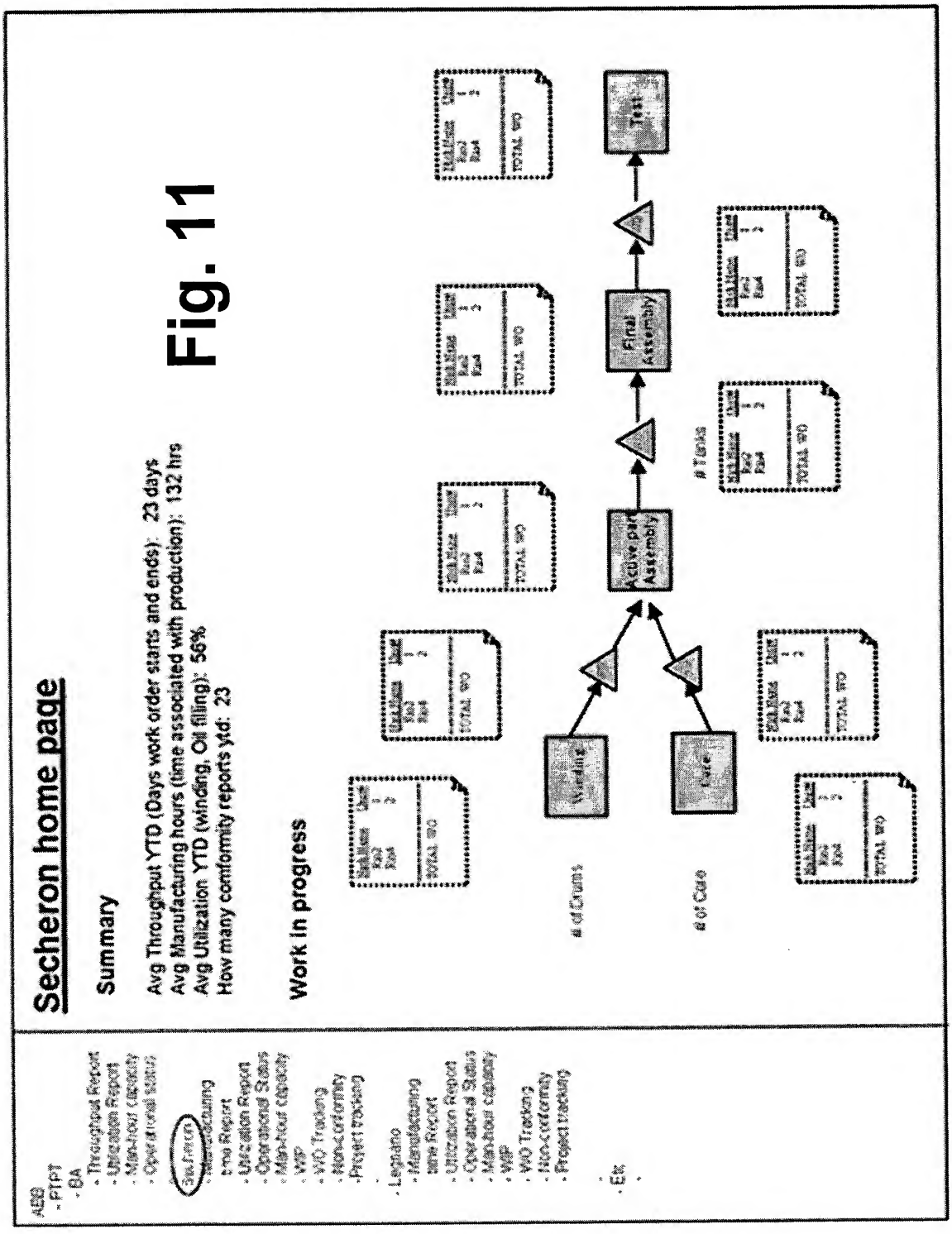

Secheron home page
Summary
Avg Throughput YTD (Days work order starts and ends): 23 days
Avg Manufacturing hours (time associated with production): 132 hrs
Avg Utilization YTD (winding, Oil filling): 56%
How many conformity reports ytd: 23
Work in progress
Winding
Cure
Active part Assembly
Final Assembly
Test
# of Coils
# of Cans
Tanks
TOTAL WO

Fig. 11

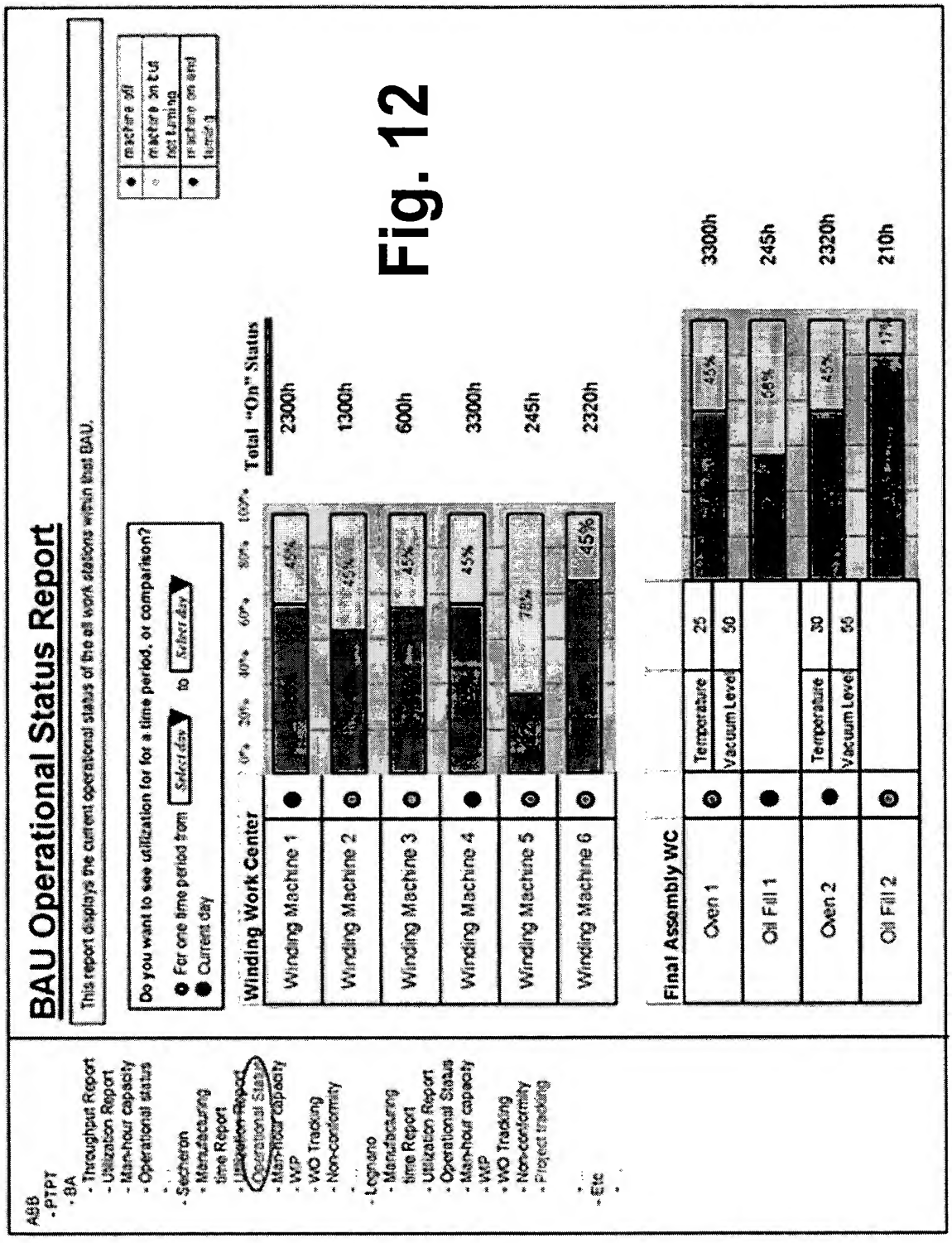


ABB
- PTPT
- BA
- Throughput Report
- Utilization Report
- Man-hour capacity
- Operational status
- Secheron
- Manufacturing time Report
- Utilization Report
- Operational Status
- Man-hour capacity
- WIP
- WO Tracking
- Non-conformity
- Project tracking
- Etc
BAU Operational Status Report
This report displays the current operational status of the all work stations within that BAU.
machine off
machine on but not turning
machine on and turned
Do you want to see utilization for for a time period, or comparison?
For one time period from Select day to Select day
Current day
Winding Work Center
Total "On" Status
Winding Machine 1 2300h
Winding Machine 2 1300h
Winding Machine 3 600h
Winding Machine 4 3300h
Winding Machine 5 245h
Winding Machine 6 2320h
Final Assembly WC
Oven 1
Temperature 25
Vacuum Level 50
Oil Fill 1
Oven 2
Temperature 30
Vacuum Level 55
Oil Fill 2
3300h
245h
2320h
210h

Fig. 12

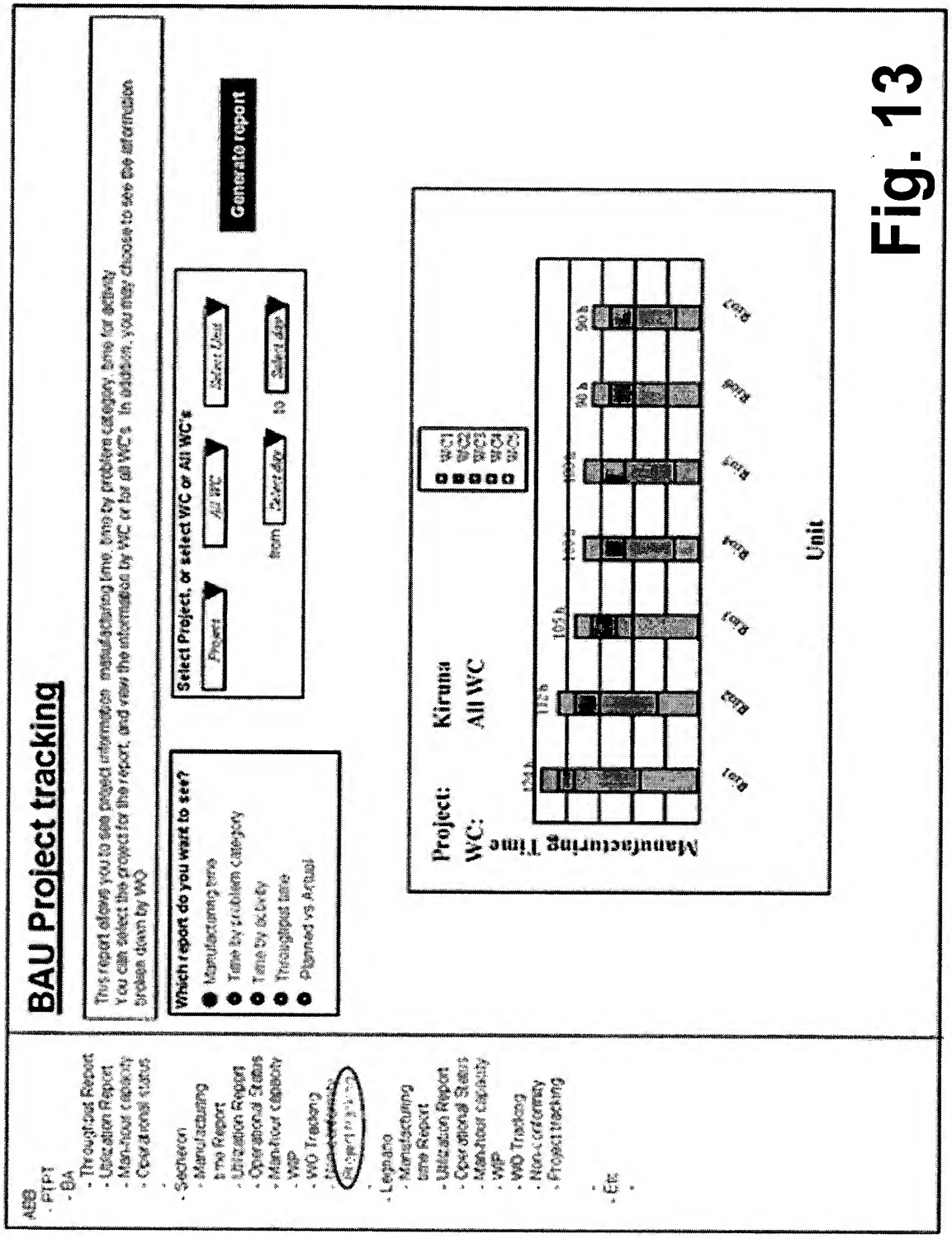


ABB
- FTPT
- BA
- Throughput Report
- Utilization Report
- Man-hour capacity
- Operational status
- Sectheron
- Manufacturing time Report
- Utilization Report
- Operational Stats
- Man-hour capacity
- WIP
- WO Tracking
- Non-conformity
- Project tracking
- Legsero
- Manufacturing time Report
- Utilization Report
- Operational Stats
- Man-hour capacity
- WIP
- WO Tracking
- Non-conformity
- Project tracking
- Etc
BAU Project tracking
This report allows you to see project information: manufacturing time, time by problem category, time for activity
You can select the project for the report, and view the information by WC or for all WC's. In addition, you may choose to see the information broken down by WO
Which report do you want to see?
Manufacturing time
Time by problem category
Time by activity
Throughput time
Planned vs Actual
Select Project, or select WC or All WC's
Project
All WC
Select Date
from Select date to Select date
Generate report
Project: Kiruna
WC: All WC
WC1
WC2
WC3
WC4
WC5
Manufacturing Time
Unit

Fig. 13

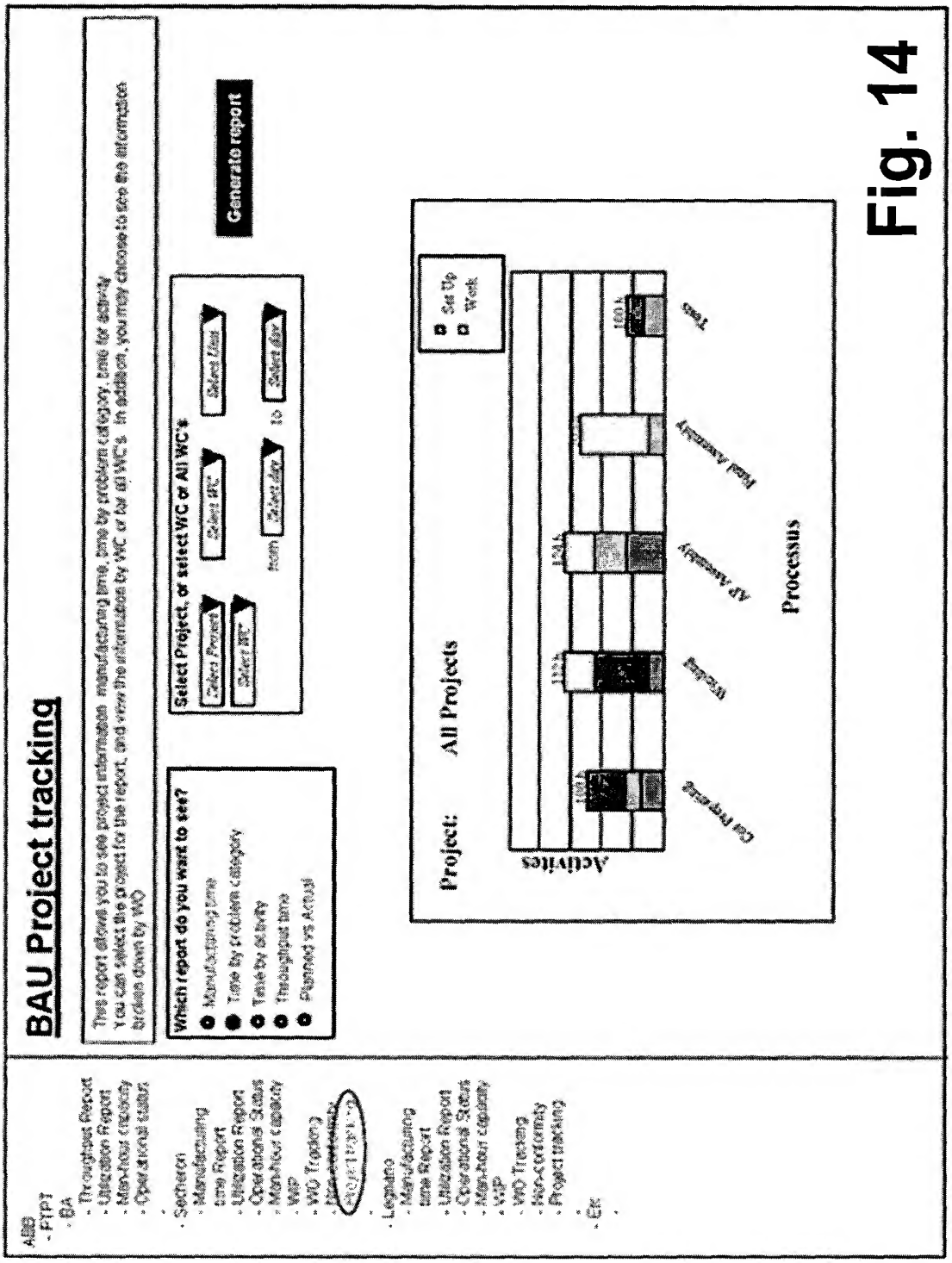

BAU Project tracking
Which report do you want to see?
Select Project, or select WC or All WC's
Generate report
Project: All Projects
Activities
Processus
Set Up
Work

Fig. 14

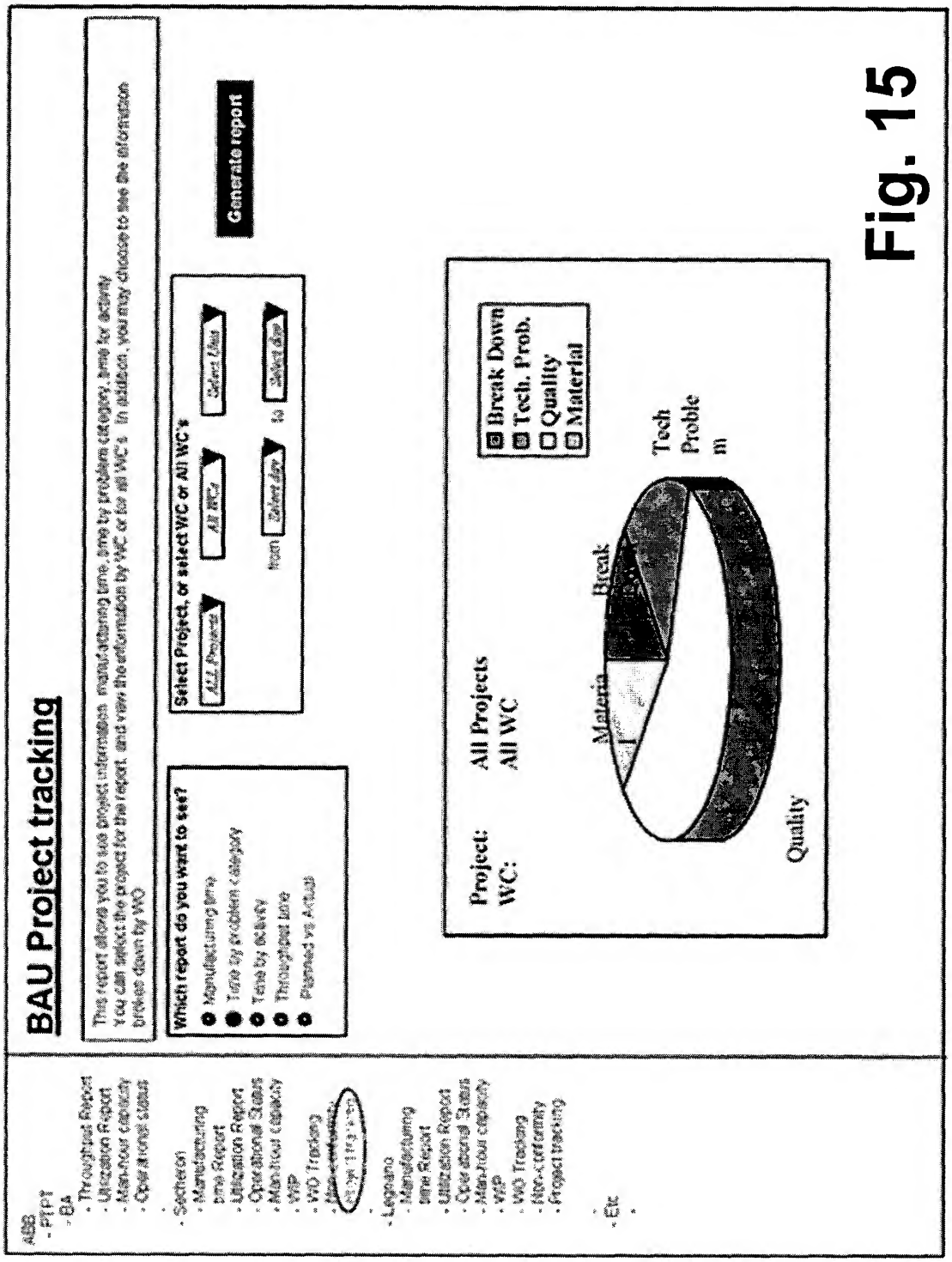


ABB
- FTPT
- BA
- Throughput Report
- Utilization Report
- Man-hour capacity
- Operational status
- Section
- Manufacturing time Report
- Utilization Report
- Operational Status
- Man-hour capacity
- WIP
- WO Tracking
- Legend
- Manufacturing time Report
- Utilization Report
- Operational Status
- Man-hour capacity
- WIP
- WO Tracking
- Non-Conformity
- Project tracking
- Etc
BAU Project tracking
This report allows you to see project information: manufacturing time, time by problem category, time by activity
You can select the project for the report, and view the information by WC or for all WC's. In addition, you may choose to see the information broken down by WO
Which report do you want to see?
Manufacturing time
Time by problem category
Time by activity
Throughput time
Planned vs Actuals
Select Project, or select WC or All WC's
All Projects
All WC's
Select Date
from
Select date
to
Select date
Generate report
Project: All Projects
WC: All WC
Break Down
Tech. Prob.
Quality
Material
Break
Materia
Tech
Proble
m
Quality

Fig. 15

Fig. 16

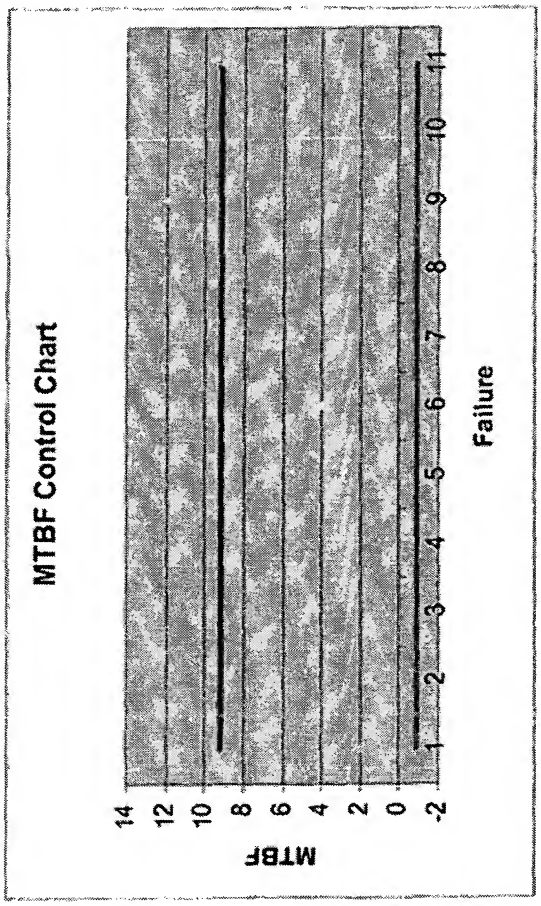
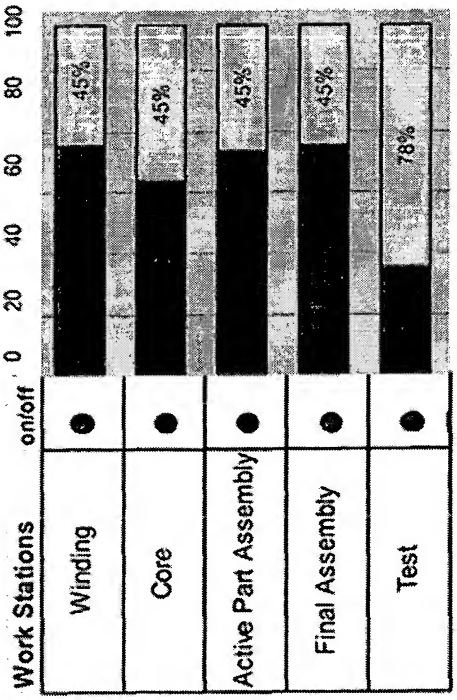

MTBF Control Chart
MTBF
14
12
10
8
6
4
2
0
-2
1
2
3
4
5
6
7
8
9
10
11
Failure

Fig. 17


Work Stations
on/off
0
20
40
60
80
100
Winding
Core
Active Part Assembly
Final Assembly
Test
45%
45%
45%
45%
78%